THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

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American Farmer Establishment.

BALTIMORE: TUESDAY, OCTOBER 7, 1834.

A FAVOR ASKED.—Our files of the Farmer and Gardener are becoming exhausted for the very gratifying reason, that our subscription list has increased faster than we anticipated. Nos. 6 and 7, and indeed, all the Nos. from 5 to 14 are much wanted. Will postmasters who have any remaining in their offices, and subscribers or others who may have any of these Nos. to spare, send them to us by mail?—Such favors will be duly appreciated by their friend THE EDITOR.

AGRICULTURAL FAIR—It has been suggested within a few days past that it would be gratifying, and perhaps beneficial to the Agricultural community, to hold an exhibition and fair in or near Baltimore, in the fall of the year annually. There is no agricultural society in action in this part of the state, and no definite plan has been agreed upon for carrying the scheme into execution; but the suggestion, so far as relates to the present season, is, that on the day after the termination of the races, which will be Saturday the 25th of this month (October) there be a "gathering together" of such objects interesting to farmers and the friends of Agriculture as can be collected in and about Baltimore on this short notice, and if it shall be attended with beneficial results, that hereafter a more extended co-operation of the agriculturists of our state be procured. At all events, there will, on the day above indicated, be offered to the inspection of the public a variety of fine cattle and sheep, and perhaps some other live-stock, and probably some agricultural implements from the manufactories of our enterprizing fellow-citizens engaged in that branch of business. Some at least of the objects exhibited, if not all of them, will also be for sale at fair prices, and it will probably be an excellent opportunity for procuring valuable live-stock implements, and other things useful to good farmers. Probably the Three Tuns tavern, at the corner of Pratt and Paca streets, will be the place of exhibition. We shall by next week be able to speak more definitely on this subject than at present, for the plan is entirely new, and nothing more has yet been decided on, than that several of our highly respectable agriculturists will unite and do what they can towards a Fair on the day above mentioned.

THE RIGHT WAY IN MARYLAND.—An attentive and skilful farmer of this state in a recent letter to us says—"I am confident that in this region, give me a plough to turn under the weeds &c., and again keep turning under what may put up, and I can make much of our land rich in a very short time—I would like to have a little plaster to help the operation."

RAIL ROADS—SPEED.—We have long entertained the opinion, that as we become accustomed to locomotion by steam power, on rail roads, we shall gradually increase in speed till a velocity shall be attained and be established as *common* which we cannot now contemplate without apprehension. Who would have thought without a shudder a few years ago, of fifteen or twenty miles an hour as the common speed of steam boats? Yet this *is* now common, and it is an increase of four or five fold, of their original velocity. We have *commenced* rail road movement with about fifteen miles an hour. Now is it unreasonable to expect that this will be increased in as great a proportion as that of boats has been?—*We* prophecy that this calculation will be realized within five years, and that a mile a minute will become "not very fast," and any thing less than that "a snailish pace." We have been led into this reflection particularly to day, by a fact stated in relation to the opening a few days ago of part of the Boston and Providence rail road. The editor who pens the account observes, "We took our places in the cars at half past 4 o'clock, P. M. and proceeded at the rate of 45 miles an hour, and the entire distance at the rate of about 30 miles an hour. Mr. McNeil then performed the same distance in a single car at the rate of 45 miles an hour, and from the exactness and regularity of the movements of the engine, and the solidity of the road, it is believed that this velocity could be sustained without materially adding to the danger of the route." Thus will people become gradually reconciled to increase of speed, till the Kentuckian's extravagant story of passing mile stones so frequently as to make the road seem a grave yard, shall be almost a *grave* truth.

GAMA GRASS.—A correspondent asks us whether the young plants of gama grass of this year's growth will require protection next winter. We are not sure that they will, but we think it will be safest to cover them with litter the first winter, especially in his region—the banks of the Hudson. We shall so protect our own. We have received no reply yet to the crowfoot question propounded in page 57.

THE CORN CROP.—We are glad to learn from various parts of the country, that the injury done to this crop by the late drought which was so severe in this region, is not near so great as we anticipated. The drought seems not to have been *generally* severe, though in some portions of country it has caused much damage, especially to the corn and potatoes.

MARYLAND HORTICULTURAL SOCIETY,

October 4, 1834.

Mr. Edward Keen presented 6 very fine crook neck Squashes.

Mr. Lloyd presented one winter Cantaloupe, a very fine specimen.

Mr. Edward Cooms presented a fine specimen of the Bon Chretian pear.

Mrs. John Lester presented 6 very superior Pomegranates, some of them measuring 10 inches and a third in circumference.

Mr. Samuel Feast presented a collection of Tea Roses, a new Noisette, Tygrida pavonia, Hibiscus palmata and vulgaris, and 30 varieties of very fine Dahlias.

Mr. J. B. Bastian presented Argemone grandiflora, Gillia Capitata, &c.

Mrs. J. Buckler presented a handsome boquette of China Asters of the quill variety, uncommonly fine.

Mrs. W. H. Freeman presented ten varieties of Dahlias; Hoya Carmosa, passiflora hybrida; Heliatropium peruvianum, Plumbago Capensis, Lotus Jacobius, Salvia Splendens, &c.

Orators are most vehement when they have the weakest cause, as men get on horseback when they cannot walk.

THE FARMER.

[For the Farmer and Gardener]

Cornstalks and Chemistry.—On the first page of your twentieth number there is an interesting account given under the signature of "A Farmer," of cooking cornstalks by a spontaneous combustion. The facts communicated in that piece are pregnant with much instruction to the farmer and cattle breeder.

That is a case, in every sense of the word of spontaneous combustion; and had there been present some combustible substance, that had been more inflammable, the whole might have burst into flame on admitting the atmospheric air, and a destruction of property might have taken place.

There is little doubt with me, that such a combustion often takes place, when some poor fellow whom suspicion has marked for his victim, has to suffer the loss of character for the supposed act of communicating the fire to the building. This case should also be a caution to farmers, how they put away fodder too green, without proper ventilation or salting it. Another point of instruction may be gained by the consideration of this case. It demonstrates the fact that fodder may be much improved by the process, whether performed by nature or art, of cooking vegetables before feeding them to cattle. You have related in a former number, in giving an account of steaming food, the beneficial effects of that process. I believe the process alluded to in your twentieth number, of the cornstalks heating in the bin to be precisely the same in effect as that of steaming—boiling by immersion in water, has a somewhat different effect, and as far as my experience goes, it does not render the food so acceptable to cattle.

Your correspondent inquires, where all the water came from, which was found in the stalk on that occasion, and says, the stalks were wet quite through their substance, and very hot.—These are the facts of the case to be accounted for on scientific principles. I have no doubt but these appearances are familiar to every farmer, though they may not have attempted to inquire into their cause. It will be remembered of what vegetable substances are composed—corn stalks contain much sugar or saccarine matter similar to sugar cane. During the Revolutionary war, there was a factory in the state of New Jersey for manufacturing the corn stalks. The manufacturers did not attempt to granulate the sugar; but sold the proceeds in the form of treacle, which they obtained in such quantity and of such quality as to make it a profitable concern. You sir, have already made your readers acquainted with the fact, that sugar is composed in a large degree, nearly one half, of oxygen and hydrogen. You have likewise shown, that the same materials, when in a gaseous state, by a union of their parts, form water. This brings us to a solution of the inquiry, where did the water which was found in the dry stalks come from? The water was generated from the substance of the stalk itself.—The cornstalk like the oak and the beach, sugar, starch and other vegetable substances, is composed of carbon, oxygen and hydrogen—whenever a vegetable substance is deprived of the principle of life, whatever that principle may be, and is placed in a situation favourable to fermentation, that process very soon begins; in the West Indies, and in Liberia it begins in some cases in forty minutes after the extinction of the vital principle. In this process the component parts of the vegetable structure are set at liberty from their state of union, and at liberty to form other combinations. It is not the saccharine matter of the stalk only, that is thus operated upon, but even the cortical part is composed of the same primitive substances, and on decomposition, produce the same results. When the hydrogen and oxygen are set free, from their combination in the stalk, these gasses unite and form water. Thus the water was formed, in the case mentioned from the substance of the decayed stalks, and not absorbed from the atmosphere.

The bin mentioned by your correspondent was said to be six feet square and ten feet high, which I suppose would hold about 200 bushels of stalks. How much water would be necessary to wet that quantity of dry stalks thoroughly, so as to be ready to drop from them after thoroughly soaking the whole substance of 200 bushels? One hogshead of water would hardly have been sufficient. It may be seen by this instance, of what great value it is to the growing crop, to have present in the soil, some vegetable matter, that is undergoing decomposition and affording moisture to the earth, from the destruction of their own substance by fermentation. If this portion of stalks in the short space of four days, could produce one hogshead of water, by the union of its disunited gases; how much would the same stalks produce during a dry summer, while the whole substance was undergoing the same process?

The hydrogen and oxygen being separated from the stalk by fermentation, the carbon is deposited in a fine powder, and forms the black mould of the soil; this in its turn being acted upon by the oxygen of the atmosphere, and probably by the electric fluid, is converted into carbonic acid gas, which, being absorbed by water in the earth, is presented to the roots of plants in a digestable form; and again proceeds in its course of vegetation, and the soil is reduced to sterility unless fresh vegetable matter be applied.

I have heard of an instance of a lot of ground being appropriated to a perpetual crop of corn, and for many years, the land was improved and the crop increased. When the corn was husked, the buts of the stalks were used in this way; a plough was run between the rows of corn, and returned in the same track, turning the furrows each way; the stalks were then cut and laid in the furrow; when the plough was again used to turn the furrow on each side back on the stalks. It was said the ground improved yearly under this practice; and we may easily conceive that to be the case, when we reflect on the result from this bin full of stalks producing such a quantity of gas.

How important an object it is to farmers, to procure all the fermentable matter possible, to be turned under the soil, is strikingly presented in this case—when the woody fibre of the material used as a manure, is very dense and hard, the decomposition will be much aided by the addition of newly slacked lime.

I am, respectfully, yours, E. A.

Agricultural Chemistry—No. 8.

To the Editor of the Farmer and Gardner:—

Lime.—I have before stated, that the principal earths concerned in vegetation were silex or sand, clay and lime. I have shown that sand and clay, perform no other part in the process of vegetation, than that of forming a location for the plant and an apparatus in which the *cookery*, if I may be allowed the expression, of the vegetable pabulum, is digested and fitted for absorption by the roots of plants; and these earths likewise, form a bed in which the plant is held firmly by its roots in that position, which best promotes the regular functions of all its parts. The species of earth which remains to be mentioned, performs a more immediate agency in the process of vegetation than either of the other two.

Lime may be styled the flux of the crude materials which are to be reduced to a soluble state, before they can be appropriated to the nourishment of plants. This earth was supposed to be a simple uncompounded substance, until it was demonstrated by Sir H. Davy to be a compound, formed by the union of oxygen with a metallic base, to which he gave the name of *calcium*. There is only one known combination of calcium and oxygen, which forms the important substance called lime, or oxyde of calcium. The proportions in which these two substances unite, has never been accurately ascertained, owing to the volatile nature of its metallic base. The prime equivalent of the oxyd of calcium in the carbonate of lime, (called marble) has been determined with much precision, by an instrument invented by Dr. Ure, and is found to be in 100 parts, 43.60 carbonic acid + 56.4 lime.

Lime is usually obtained for chemical purposes, from marble of the whitest kind, or from calcareous spar, by long exposure to a strong red heat. It is a soft white substance of specific gravity 2.3. It requires an intense heat for its fusion, and has never yet been volatilized. It is soluble according to Davy in 450 parts of water, and 760 parts according to other chemists. If a little water be sprinkled on newly burnt lime, it is rapidly absorbed with the evolution of much heat and vapor. This constitutes the phenomenon called slacking. The heat proceeds from the consolidation of the liquid water into the lime, forming a *hydrate*, as slacked lime is now called. It is a compound of 3.56 parts of lime and 1.125 of water; or very nearly 3 to 1. If lime water be exposed to the air, it gradually absorbs carbonic acid from the atmosphere, and becomes an insoluble carbonate of lime, while the water remains pure. Lime water renders vegetable blues green; yellows, brown; and restores to reddened litmus its usual purple.

When lime is heated strongly in contact with chlorine, oxygen is expelled and chlorine is absorbed. For every two parts in volume of chlorine that disappear, one of oxygen is obtained; when liquid muriate of lime is evaporated to dryness, and ignited, it forms the same substance, or chloride of calcium. It consists of 2.56 calcium +4.45 chlorine = 7.01. Chlorine combines also with oxyd of calcium or lime, forming the very important substance used in bleaching, under the name of oxymuriate of lime; but which is more correctly called chloride of lime.

The genus called lime, embraces nine species; of these the carbonate, in some respects, forms the most interesting species in the mineral kingdom. It exists more abundantly than any other simple mineral, and by some is supposed to form one eighth part of the crust of the globe. In fact calcareous minerals of this species are every day produced, arising either from the disentegration of carbonate of lime, which had previously existed in the mineral kingdom, or proceeding from the decomposition of calcareous substances, once attached to animals.

It is an opinion maintained by some that all calcareous matter has been derived from animal origin; however that may be, it is certain that there is a rapid production of this substance in the tropical climate by shell-fish. I once witnessed an instance of this fact, being on the coast of Africa, in a vessel, the bottom of which was not coppered, it became very foul, and at Sierra Leone she was cast down and the bottom scraped; on arriving at Monrovia, after a passage of fifteen days, the vessel was again examined, and other barnacles were found attached to her bottom, with carbonacious shells, full six inches long, which had grown in that time. From whence was this carbonaceous matter derived? Was the metallic base or calcium secreted by the insect? If we can admit *that* to have been the fact, the oxygen and carbon may easily be accounted for. The human system has the faculty, in some states of fever, of forming carbonaceous concretions, especially in gouty affections. Whatever may have been the origin of calcareous matter, all, who have any experimental knowledge of its effects in agriculture, will appreciate its value very highly.

We have seen that the metallic base or calcium, united to oxygen, forms pure lime, and that lime attracts carbonic acid from the atmosphere and then exists unchanged in the form of carbonate of lime as we see it in quarries. We here see two of the ingredients of which all vegetable substances are composed; and when water is sprinkled on newly burnt lime, it absorbs nearly one part in three of water. We here find, that lime, in these different states, contains all that is necessary to constitute a vegetable substance, viz: oxygen, carbon and hydrogen. It has been formerly shown, that sugar contains oxygen 50.63, carbon 42.47, and hydrogen 6.90 in the 100 parts—also, 450 parts water will dissolve one part of lime; which being taken up by the roots of vegetables, and carried into circulation, there meeting with the hydrogen in the water, and exposed to light and the electric fluid, which appear necessary to the formation of vegetable matter, these materials may be so arranged, as to form sugar or woody fibre, according to the peculiar organic structure of the vegetable parts to which they are applied. In this way it may be seen that lime becomes really the food of plants.

But it is not in this way that lime imparts its greatest value in agriculture. It likewise acts as a solvent of vegetable and animal matters, that are put into the earth, by its chemical action on their substances. When vegetable substances are deposited in the earth, with quicklime, its first operation is to absorb all the moisture from the vegetable fibres; this deprives them of their oxygen and hydrogen; and the carbon is deposited in the earth, and forms the black mould, which being acted upon by oxygen gas and heat, when every 13 grains of carbon that is thus dissolved, forms 100 cubic inches of carbonic acid gas, which gas being absorbed by water is prepared to renew its round in a new vegetable form.

(To be continued.)

Ribbon Grass.—The ribbon grass of our gardens, (*Phalaris Americana*) is likely to become of great value in our husbandry: it has been found to be better adapted to wet, boggy grounds than any other species of grass; to propagate rapidly, either by seeds or by roots; to yield a very large product in hay or pasture, and to be well adapted to farm stock. The first suggestion of this fact came to us in a letter from Abednego Robinson, of Portsmouth, N. H., who says the discovery was accidental.

"A neighbor, he says, wishing to get rid of some of the roots which encumbered the garden, threw them into a bog, where they took root, and spread over a large space of ground, excluding every other plant. The water flows through the roots at all seasons. The turf has become so solid as to bear a cart and oxen. I walked through the grass when in bloom, and never beheld a more handsome and luxuriant growth. It stood perfectly erect, full of large leaves, even, and four or five feet high. It produces excellent food; cattle feed it close, and appear to be more fond of it when made into hay than any other grass. I have spoken for one half of the roots of the patch, and have ground ploughed in my meadow into which I intend to transplant them, at about the distance of corn hills."

On a recent visit from the Hon. E. Goodrich, of Hartford, we were happy to receive from that gentleman, a confirmation of the good opinion of the *phalaris*, which had been induced by Mr. Robinson's letter. It has been found as beneficial in Connecticut as in New Hampshire. Not recollecting the particulars narrated, we would beg of Mr. Goodrich, when he sees this, to forward them to us, in order that we may publish them correctly. The subject merits further attention; and if our anticipations are not irrationally founded, the *Phalaris Americana* will yet become the gama grass of the north. It is truly perennial, spreads rapidly, and may be inoculated in the manner suggested by Mr. Robinson, especially in a soil saturated with water, with great facility, and at a trifling expense.—*Cultivator.*

[Will Mr. Goodrich or the editor of the Cultivator, or any other gentleman who can, furnish us with a description of the seed of the *phalaris*; or, if possible, with a few of the seeds in a paper or letter by mail. The seeds of the gama grass are nearly as large as kernels of corn—unlike any other seed we ever saw.

Editor Farmer and Gardner..]

Crops in Europe.—The last advices from England state that the crops throughout the United Kingdom have generally been secured in excellent condition. The wheat crop is said to be a full average one, although the quality will not probably prove as good as that of the two preceeding years. In Ireland, and in the northern parts of Britain, some little damage was expected to reach the remaining outstanding grain, but it was not regarded as of any moment in the general estimate. The stock of old wheat on hand is declared to be larger than it has been at the same season for years back.

A London date of the 21st August mentions that the last German papers contain very unfavorable accounts of the harvest in the north of Europe. In Russia, Poland, Hungary, Prussia, Silesia, Bohemia, and even in Austria, according to those papers, such a continuation of drought as has prevailed since the commencement of the last spring is unprecedented, and the consequences are declared to be most ruinous to the hopes of the farmer.

Self sharpening Ploughs.—We saw at Rough Creek Church in the county of Charlotte a few days ago, several of these singular ploughs, so called because they are so constructed as to sharpen themselves in the operation of ploughing. The body of the plough is like the common dagon, and the point is a long and separate piece of iron, sharp at both ends like a mill peck, and running back towards the hinder part of the plough. When it gets dull by wear, it is turned over and the other side applied to the ground. After that end is sufficiently worn, it is unscrewed and the other turned before, which will last as long as the first. The wing of the plough is made in a triangular form, and each of its three sides can be alternately applied to the soil. It is said that one will last a year without going to the shop, and even then its repairs are very inconsiderable. It is said that they perform well, as far as they have been tried.—*Danville Reporter.*

Manure.—Arthur Young took five equal portions of a field, one portion of which he manured with dry cut straw; a second with a straw soaked five hours with fresh urine; a third with straw soaked in like manner fifteen hours, a fourth with straw soaked three days; and to the fifth portion he applied nothing. The whole was tilled alike and sowed with grain. The product in grain of the first was thirty-nine, of the second fifty, of the third sixty-three, of the fourth one hundred and twenty-six, and of the undunged portion nine. In weight of grain and straw, the product of the several portions, in the order above named, were found to be 100, 120, 300, and 48. This experiment affords a pretty conclusive demonstration of the value of vegetable matter as food for plants, and particularly of the fertility imparted by the urine of animals, which latter to us is generally lost to all useful purposes. It indicates the propriety of so constructing our cattle yards and stable floorings as to concentrate this liquid, and where there is no cistern to retain it, of applying straw and other litter to absorb it ere it is wasted. Another fact is worth noting—the rotting process took place wholly in the soil—the fertility was induced by long manure, and the liquids which it held—and not by muck.

Genesee Recorder.

THE BREEDER & MANAGER.

FARMING—SWINE, &c.

We have been recently favored with another letter from our friend Wm. K. Townsend, Esq. of Connecticut, from whom we last summer obtained our fine pigs of the Norfolk thin rind breed. We shall take the liberty to make some extracts, premising that the letter was written in answer to a request on our part for such observations as he might be disposed to make on the subject of farming generally, and of live stock particularly.

"DEAR SIR—Your favor of the 27th ult. was duly received; I am happy in giving you any information in my power in regard to live stock, or any thing relating to farming, which is a business that occupies all my time, and if it is not so much of a money making employment as some others, it is to me more interesting and pleasant than any other I could pursue; my health was never so good, and my anxieties and daily, unavoidable perplexities and troubles, never so few, as since I have followed an agricultural life. I too, am cultivating an old neglected farm, full of rocks, hedge-rows and briars, yet I find from an experience of five years, that I can by pursuing a thorough course of clearing, subduing and manuring the old neglected fields, obtain an abundance of all the various things we wish to cultivate, both for our own comforts, and to sell in the neighbouring market."

The farmer's life has generally been considered one of the most happy that man is permitted to enjoy, and we believe it is so; and why? To this important question we are inclined to respond, because he has most opportunity and most occasion to "hold converse" with those objects which serve to soothe and quiet the mind—the produce of his fields, and his garden—his domestic animals and his own family—these are the objects which mainly engage his attention and his affections, and they all give him pleasure. On the contrary, the man who mixes most with the world, especially he whose intercourse is chiefly with his own species, the public functionary, the politician or the courtier, will generally experience most perplexity, will find causes of continual excitement and be forced to witness constantly things and actions, of which he cannot but disapprove. Hence the relief which those experience who retire from the busy haunts of the city to the quiet scenes of rural life; but we are sermonising upon friend Townsend's text.

"I have been looking over my memorandum book to ascertain the age of the pigs sent you some weeks since. I find the pig from the premium sow was farrowed on the 29th April, I think the others came about three weeks earlier—say about the 10th April; you inquire whether I allow my sows and boars to run together, and to breed without restraint. They run together in the same pasture at certain seasons of the year, the boar confined at other seasons. I want my sows to pig in the spring—say last of March, or early in April—in fall, in September, or early in October. We cannot always have them come at these times, yet I try to manage so as to fetch them at, or as near to that time as possible; my old sows, as a general thing, do better than young ones; they are more likely to raise their pigs. I do not allow my very young pigs to run in the pasture with the sows; they are in the pen while the sows are allowed to range in the fields; the pigs are in this way soon learned to feed at the trough; the sows are kept in better condition than when the pigs are sucking them constantly. The sows are turned in to the pigs at certain times in the day and fed; after the pigs have sucked, they are turned out again; they remain with the pigs during the night, are fed early in the morning, and then turned out; they will in a short time drive in and out of the pen and pasture as handy as cows or any other stock.

I was surprised on the receipt of your Farmer, No. 9, to see my letter in regard to the pigs, inserted at full length—I am not in the way of writing to meet the public eye, yet if a plain statement of facts will be the means of inducing a single farmer to change a poor breed for one that will prove more profitable, I could not object to their being thus given to the public."

This is as it should be. Our correspondent is not in the practice of writing for the press, but his letters are instructive and clearly expressed, and what more can be wanted by his brother farmers? Reader, "go thou and do likewise."

AN INDIAN HORSE.—From the last number of the graphic "Indian Sketches," published in the N. York American, we extract the following:

"In the meantime, those of the Indians who had promised horses in the first day of our meeting now brought them up. A young indian first came forward, and led up a bright, jet black mare—after him followed another, holding in his hand a long buffalo tug, or halter, which restrained the wild motions of a two year old colt; his color was a snowy white, here and there broken with spots of brown. He had been wild in the prairies but a few weeks before. He was a slave, but had never been mounted; his back had never bent to a burden; they led him up in his own native wildness—his tail stood out—his ears were pricked up—his eyes starting—his nostrils expanded—and every hair of his long mane seemed almost erect with an undefinable feeling of terror. At one moment he dashed swiftly around at the full stretch of the long tug which secured him—then pausing and shaking his long mane over his head, he fixed the gaze of his almost bursting eyes upon his captor. Then raising his head, and casting a long, lingering, and almost despairing gaze upon the hills of the prairie, which till then had been his home, he made a desperate leap forward, dragging to the ground the Indian who held the end of his halter; but others rushed to his assistance and held him in. The crowd then attempted to close around him, but he reared upon his hind legs and kept them at bay with the rapid and powerful blows of his fore feet.

"At length a young Indian, who was standing near, threw off his robe: he crept cautiously forwards the animal from behind, and then with a sudden leap he bounded upon his back, and seized the tug which was secured in his mouth. Before this, the efforts of the animal had been violent; but when he felt the burden upon his back, when he felt the curbing hand of his rider, he sent up a shrill and almost frantic scream; his form bounded in the air like that of the active wild cat; he reared, he plunged but in vain—his rider was a master hand, and he retained his seat as unmoved as if he had constituted part of the animal itself; he curbed him in, he lashed him with his heavy whip until he crouched like a dog upon the prairies; his spirit was crushed; and the last spark of freedom was extinguished. Shortly after, one of the hunters came up and tied a pack upon his back; he made no resistance; and they led him off with the rest to finish his days in drudgery and toil.

LECTURES ON VETERINARY MEDICINE,
Delivered in the University of London, by Mr. Youatt.—LECTURE V.—CONCLUDED.

The sense of smelling.—The sense of smell is mostly connected with our enjoyment, occasionally, however, it is a source, perhaps a useful one, of inconvenience and annoyance. In the quadruped it is connected with life itself; it is that by which the animal is guided in the choice of wholesome food, and by which also he is chiefly led to the perpetuation of his species.

The Olfactory Nerves.—The olfactory, or first pair of nerves, have a double origin, viz. from the corpus stratum, and the base of the corpus callosum. They seem to be prolongations of the medullary substance of the central portion of the brain. They are the largest of the cerebral nerves. Compare their development with that of the olfactory nerves of the human being. There is a remarkable difference, but not more so than in function; for in the one they are connected with pleasure, and in the other with life. Their course is short, exceedingly so; and they have not a single anastomosis, in order that the impression made on them may be conveyed undisturbed and perfect to the brain.

The olfactory nerve is a prolongation of the substance of the brain, and it abuts on the cribriform plate which I have described. I will not speak of the singular cavities which it contains, nor of their function; this belongs to the sensorial system, but it is in contact with the thin perforated plate of bone occupying the chasm between the base of the æthmoid bone and the frontals, and is in a manner pressed through this cullender-formed plate, and its pulpy matter is clearly to be traced over the upper part of the septum, and over a part of the superior turbinated bone. Although we soon lose it in the mucous membrane of the nose, we think we are warranted in concluding, that in a more filmy form it is spread over the whole of the cavity, and probably over all the sinuses of the face and head. It is, however, so mingled and incorporated with the mucous membrane, that no power of the lens has en-

abled us to follow it so far. It is like the *portio mollis* of the seventh pair, eluding the eye, but existing in sufficient substance for the performance of its important function.

An acute sense of smell is necessary to the quadruped. Every plant has its peculiar scent, and probably a scent of a marked character as connected with nutrition or destruction. We find out something of this by experience; the brute learns it from mingled experience and instinct. Without instruction and without experience the beast has generally some salutary warning to guide him to that which is nutritive, and to warn him from that which would be poisonous. He is, however, sometimes deceived; but that is only in the early part of the spring, when the scent of the infant plant is not developed. Horses at grass are frequently ill at that time, and cattle more seriously so, and, occasionally, they are actually poisoned. When the great Linnæus visited Tornea, the inhabitants complained of a distemper which killed many of their cattle, and especially when first turned out into the meadows in the spring. He soon traced the disorder to the water hemlock, which grew abundantly there, and which in the spring the cattle did not know how to avoid. Instinct is not an unerring guide; it is a powerful principle, and was wisely and kindly given where reason is limited; it does not, however, always guide the animal, when placed in an unnatural situation, or shield him from the consequences of our absurd management. When our calves and lambs are taken too soon from the dam, and turned with little or no experience into the pasture, they eat indiscriminately every herb that presents itself, and many of them are lost. Had they been suffered to browse a little while, or a little longer, with the mother, she would have taught them to distinguish the sweet and wholesome herbage from the deleterious and destructive. This is a point of agricultural economy not sufficiently attended to.

For the immediate and natural purposes of the animal, instinct is strong, but nature has made no provision for our folly. Galen once took a kid from the womb of its mother, and carried it into an adjoining room. He had previously prepared three dishes, containing various sweetened and tempting things, and one of corn and one of simple milk. The little animal, after having licked and cleansed itself for a while, got up and smelled at every dish, and began to lap the milk and drank it up. Here instinct was as strong as the purposes of the creature required. Milk was destined to be his first food, and instinct led him immediately to that. But nature designed that he should be gradually accustomed to his after-food by the side, and under the tuition, of his dam. But if the farmer, from ignorance or caprice, or because he thinks he can rear a few more calves, or bring his lambs or their mothers earlier to the market, separates the one from the other, and turns out his young stock to browse, inexperienced and untaught, why he must take the consequence of his folly and his avarice. This is a lesson in breeding or in grazing which we possibly may be enabled usefully to inculcate in our employers.

The Comparative Size of the Olfactory Nerve in different Animals.—Observe, in the specimens before you, the greater size of the olfactory nerve in the horse, the ox, the sheep, the swine, and the dog, and its peculiar form, as well as size, in the bird, compared with that nerve in the human brain. Again, compare the relative size of this nerve in the different animals, accordingly as they need, and possess, an acute smell. See the brain of the *horse*—our stabled servant—comparatively rarely sent to select his own nutriment amidst the herbage of the field, but having the greater part of his food provided for him. Next observe the brain of the *ox;* it is not more than half the size of that of the horse; he possesses not the intelligence of the horse; but not being so much domesticated, being oftener sent into the field to shift for himself—or if worked by day, usually turned out at night—the olfactory nerve is nearly as large as that of the horse, and comparing the bulk of the two brains, a great deal larger. The olfactory nerve of the *sheep* and the *swine* is comparatively as large as that of the ox, or more so, and for the reason already assigned; and, *lastly*, observe in the dog the still greater bulk of this important portion of the brain.

The Comparative Bulk of the æthmoid Bone.—I have said that we can plainly trace the nervous pulp over the æthmoid and upper turbinated bones; we suppose that it spreads over, but not in so great a quantity, the other contents of the nasal cavity. See then the increased bulk of the æthmoid bone of the *horse* compared with the human being; the æthmoid bone of the *ox* is considerably larger; that of the *sheep* larger still; and that of the *dog* occupying the whole of the upper part of the cavity, and thrusting the cornets from their situation, and rendering them comparatively diminutive and insignificant.

The Acuteness of Smell in different Animals.—Observe all our domesticated animals how carefully they examine their food and their water, and judge of their good or bad qualities by the smell. They submit every stranger to the scrutiny of this sense, and form their opinion of him, and even of his intentions, by the intelligence which they obtain through its medium.

In the Dog.—Passing by all the others, we trace in the dog the triumph of olfactory power. How indistinct must be that scent which is communicated to, and lingers on the ground, by the momentary contact of the foot of the hare, the fox or the deer! Yet the hound, of various breeds, recognises it for hours, and, some sportsmen have said, for more than a day; and he can not only distinguish the scent of one species of animal from another, but that of different animals of the same species. The fox-hound, well broken in, will rarely challenge at the scent of the hare, nor will he be imposed upon when the crafty animal that he pursues has himself taken refuge in his earth, and thrust out a new victim before the pack.

The blood-hound in former days, and even in modern times, cruelly and disgracefully trained to the scent of the human being, but now in his legitimate office the guardian of the deer or of the mansion, gives interesting proof of almost incredible acuteness of smell.

A miscreant had broken into a gentleman's stable, and mutilated some of his horses. When this was discovered on the following morning, a bloodhound was brought out. After a while he hit off the scent, and followed it more than fifteen miles. He then bayed at a cottage door, and the door being opened he rushed up stairs, and would have torn to pieces a man who was a-bed there, had he not been prevented. It was a discarded servant, who, instigated by a spirit of revenge, had committed the atrocity.

The most interesting case I know of this acuteness of scent had reference to a shepherd's dog, a *colley*. It is related by the Ettrick Shepherd, and he shall tell it in nearly his own words.

"A young man, his first offence, selected some sheep from the flock of a former master; and set off with them towards Edinburgh. But he had not gone quite off the farm before his conscience smote him, and he quitted the sheep and let them go again to the hill. He called off his dog, and, mounting his pony, rode away. After having proceeded about three miles, he thought he heard something coming up behind him, and in a few moments he saw his dog with the stolen sheep, driving them at a furious rate to keep up with his master. He was exceedingly troubled, for the sheep having come so far from home he dreaded there would be a pursuit; he beat the dog for the uncalled-for interference, and rode off a second time, taking the colley with him. He had not ridden above a mile before he perceived that his assistant had again given him the slip, and suspecting for what purpose, he was terribly alarmed as well as chagrined. He resolved to abandon the animal to himself, and took a road across the country which he was sure the other did not know and could not follow. He pursued a circuitous course through some lanes, and at length arrived at a gate which he opened and shut behind him; and, half a mile farther on, he called at a farm-house and breakfasted. As he was about to start again, a person told him that he need not hurry himself, for his dog had got the sheep safe enough down at the crooked gate. After this it was impossible for the poor fellow to get rid of them, and so he took possession of them, and drove them on, and sold them, and the transaction cost him his life. The dog, for the last four or five miles he had brought the sheep, could have no other guide to the road his master had gone but the smell of his pony's feet.

In the Swine.—The scent of the *pig* is acute enough. I have spoken of his discovering the earth-nut and the truffle many inches under ground. It is a well-authenticated fact, that a gamekeeper once broke in a sow to hunt patridges, and she was as sure a finder and as stanch a backer as any pointer that could be brought into the field.

In Birds.—Of the accuracy of the stories the wonderful scent of *birds* I have considerable doubt. That their sense of sight is exceedingly strong I can readily believe; for they have a peculiar mechanism by which they can, at will, convert the eye into a telescope of extraordinary power: and I imagine that it is by the sense of sight principally that they distinguish their prey. They are said to recognize the peculiar smell of approaching death. The crow and the raven will hover over the weakly lamb, and sometimes attack him before he is dead. Who has not observed with a thrill of horror, the vultures following the ill-fated Mazeppa, in that beautiful engraving depicting his cruel punishment? I do not imagine that the

scent is here concerned, but they see that their destined prey is weak and nearly exhausted, and are hovering round to pounce upon it as soon as, or before, life is extinct.

If the sense of smell be thus acute in all our patients, we account for it as a provision wisely and kindly made to guide them to their proper food or fit them for our service; but there is an important use that we may possibly derive from our knowledge of this extreme sensitiveness, namely, to guard a little the membrane of the nose from some of the injuries and dangers to which it is exposed. Persons bottling a considerable quantity of spirit have become partially intoxicated by the impression of the vapour of the liquid on the nerves of the Schneiderian membrane, whether the sensitive or the olfactory. One of my men used to be regularly purged when he pounded aloes.

The membrane of the Nose is a vulnerable part.—Contagion results from certain miasmata or poisonous particles diffused through the air. Their impression may be made on the Schneiderian membrane and not on the lungs, or, at least, principally on that membrane. I consider the membrane of the nose (and thus I shall have to describe the larynx to you) as a guard to the lungs. Of the more solid particles which enter the nostrils, few or none are permitted to reach the lungs, and not even the larynx. I might appeal to the habitual snuff-taker in proof of this. He may load his nostrils as he will, but not one atom of the deleterious powder reaches the lungs. So the deleterious gases are arrested, possibly absorbed, by the mucus membrane on which they impinge.

The Schneiderian membrane then is probably *a vulnerable part.* It may be the medium through which much evil is communicated, and contagion conveyed. The particles may not be sufficiently numerous or powerful to reach or dangerously affect the lungs, but they arrested by the mucus membrane of the nose, and absorbed by it, and the constitution becomes thus affected. A smaller quantity of poisonous exhalation or gas may here make its fatal impression. There appears the greater necessity for attention to ventilation, and especially for preserving this membrane from being habitually stimulated and debilitated by the effluvia of a close and heated stable, and thus, more than naturally, disposed to take on disease.

On the influence of what Nerve does the sense of smell depend?—M. Majendie has made some curious experiments on dogs, from which he has drawn the singular conclusion, that the sense of smell does not depend, as we have been accustomed to imagine, on the olfactory nerve, but on the fifth pair. As the experiments were made on one of our patients, and relate to the subject of our present lecture, it is necessary that I should notice them. He first divided the fifth pair of nerves, and from this moment no puncture, no corrosive substance, no penetrating odours, not even those of ammonia and acetic acid, produced the slightest visible impression on the membrane of the nose. In another dog he destroyed the two olfactory nerves, and he presented to the animal strong odours of which he evidently was conscious of the usual and full effect, and he conducted himself exactly as he would have done had he been in his ordinary state. M. Majendie then made some trials with weak odours such as those of aliments, but he could obtain no results sufficiently distinct to enable him to affirm that that kind of odour acted upon the nose of the animal: and, thence he concluded, that it may be possible that the olfactory nerve is not the nerve of smell, and that the olfactory sensibility is confounded with the general sensibility of the same nerve. I have here quoted the substance of what he states in his Physiology, and which is abridged from his Physical Journal.

Let us consider this a little. I will take the second experiment first. He divides the olfactory nerve, and he presents to the animal strong odours, and the dog is as sensible to their impression as he was before. The odours of which he made use, as it appears from his journal, were ammonia and acetic acid. Now, on what nerve do they make their chief impression? On that of common or peculiar sensibility? When I go into a close stable in the morning, and the conjunctiva is irritated, and my eyes weak, which are the affected nerves?—Decidedly those, and those only, of common sensibility. From what does the snuff-taker derive his chief pleasure, but from the titilation of the nerves of common sensation? And it is the impression which is made upon *them* that causes the violent sneezing of the unpractised snuff-taker. M. Majendie had divided the olfactory nerve, and the natural effect followed; the nerves of common sensibility were still affected by the pungency of the ammonia, as the conjunctiva would be; and he candidly adds, that he could not perceive that weak odours then acted upon the nose.

He also divides the fifth pair, and the animal no longer shrinks or sneezes when the ammonia is applied,—and for the plain reason that the nerve of common sensation is destroyed. But what does the dog do? He does that which M. Majendie confesses in his journal, but does not state in his physiology. When food was offered to him rolled up and concealed in paper, he unrolled the paper and got the foodand ate it; that is, although he had lost the common sensibility of the part, he still was acted upon by the odour of the meat; or, in other words, the true olfactory nerve still remained entire. I confess that the experiments of M. Majendie are satisfactory to me, but I draw a conclusion from them precisely the reverse of that which he did.

Thus far, however, I am ready to go with him, that there is a mysterious connexion between the nerves of common and of specific sensibility; and that their agency must be combined in order to render the function of either complete: and that, for this reason, it probably is that they run to the same part, and ramify over the same tissue; I see in every portion of the frame, the nerves of organised animal life combining their influence in the discharge of the most important functions—they are in a manner necessary to each other; but I can separate them from each other in my mind, and I can give to each its peculiar agency. So here I see the nerves of common and peculiar sensation combining for the perfection of the sense of smell. I can believe that the influence of the fibrils of common sensation on the tissue, may dispose the nervous pulp of peculiar sensation more acutely to receive the impression, and to convey it to the common sensorium; but the very experiments of M. Majendie convince me that the olfactory nerve is the nerve of smell, and that the fifth pair is the common sensitive nerve of the face.

THE GARDENER.

Agricultural Botany.

Mr. Editor—If geology, as I showed in a late number of your paper, acquaints farmers with the ingredients and nature of soils, and the best method of improving them, botany informs them of the properties and comparative value of plants cultivated upon soils. And what plant is it not useful for farmers to understand? Is not a knowledge of the forty or fifty different kinds of oak found in American forests, of walnuts, the birches, the maples, and even of the whole of the one hundred and forty different kinds of forest trees, which adorn and enrich American hills and dales, useful to the practical farmer? Is it not important that he should know which to destroy as well as which to cultivate? Is there any fruit tree which it would not be interesting and useful for the farmer to know? And which of the grains, grasses or roots fit for cultivation may it not be of some use for the farmer to understand? Might he not even use a knowledge of the weeds and the noxious plants, which obstruct his labors, or defeat his efforts to some advantage? Of the fifty thousand different plants growing upon our globe, which may not in some way be useful to some farmer on some spot upon our earth?

Not merely the external properties of plants, such as their tenderness, weight, strength, durability, size, rapidity of growth, nutriment, flavor, ease of cultivating, profit arising from them, &c. &c., but the laws of vegetation to which they are subject, are useful, and ever important for farmers to know. It is undoubtedly known to most farmers, that a single grain of corn, of a red color, planted in the centre of a large field, will spatter many of the ears for a great distance around it, with red kernels or grains. But do they all know why a single grain of corn should exert such an influence upon the plants around it? If not, the knowledge of a single principle, which pervades almost the whole of the vegetable kingdom, would acquaint them, not only with this remarkable fact, but with a thousand others not less remarkable.

Among vegetables, no less than among animals, are males and females. In some instances the male and female, as in the apple, are in the same flower; the one called the stamen, the other the pistil. In other plants, as in Indian corn, the male and female are on different parts of the same plant, the one being in the top gallant, frequently so called, the other in the silk. On other vegetables as in the mulberry, the male and female are on different plants, as it is well known that some mulberry trees bear fruit while others bear none.

In the Indian corn, if the farina, or flower upon the stalk from the red kernel, be blown to the most distant part of the field, and strike upon a silk there, it will produce a red kernel. On the other hand, if a silk receive no farina from any source, it will be barren, and no grain be connected with it. Consequently if corn be topped before the farina is blown, or falls from the tops upon the silk, the crop will be entirely destroyed.

This law of vegetation which is so strikingly illustrated in corn, is equally true and important in many fruit and ornamental flowers, and pervades the whole vegetable kingdom. As this is but one among the numerous laws governing vegetable nature, the importance of an acquaintance with those laws, must be evident to every one.

Such being the fact, I am glad to learn, that collections are already made in several places, to be carried or sent to the *Education Conventions* appointed on the first Wednesday of November next. If this example should be generally followed in all the counties throughout the states, a *good beginning* would be made for diffusing a knowledge of practical, agricultural botany, both among farmers and all other classes of the community. AGRICOLA.

MULBERRY TREES.

BROTHERTON, September 23, 1834.

Sir—I send enclosed a leaf taken from a mulberry, which tree is growing in my yard; I have about twenty of them growing in different situations about my premises, and from their great susceptibility of propagation, I have concluded to send you the leaf, to ascertain if it is the morus multicaulis, which I see recommended so highly in the Farmer and Gardener. If the result be as I anticipate, from the description of the tree I have so frequently seen, I shall forthwith make arrangements to propagate them the ensuing spring on a liberal scale, otherwise they will be cultivated only for shade trees in, and about the yard.

I feel convinced that many thousands of them could be raised in a short time, as they grow at an astonishing rate, and if turned to the account of the silk raising business, it will be a profitable business—let me know through the Farmer and Gardener. Yours, H. W. W.

[The leaf sent us, is of the tree usually called the Chinese paper mulberry (*Broussonetia papyrifera.*) It is not a *morus* or mulberry, and therefore its foliage is entirely unfit for food for the silk worm. It makes a beautiful and very dense shade, and is as our friend observes of very quick growth. and easily propagated. The *morus multicaulis* grows as fast as any tree we are acquainted with. We have hundreds of plants now in our garden from five to seven feet high, which grew from the root since March last. The trees we kept over winter to propagate from, we cut off even with the ground in March, and these shoots are from those roots to the number of from two to six from each root, thus proving its title to the appellation of *multicaulis* or many stalked. Some of the leaves on these young shoots are 13 or 14 inches long, and 10 or 11 wide. Our young trees will be fit to transplant in November.

EDITOR.]

From Niles' Weekly Register.

THE CULTURE OF SILK—Silk has been advantageously cultivated in Connecticut for several years, and the *crop* is valuable. There is much room to extend this business. It is profitable, and excellently well fitted for the employment of the spare labor of women and children, not much interfering, or for short periods only, with their usual avocations. Two or three millions of dollars might be easily, and without any seeming effort, added to the annual creation of values in the United States, from this source—an amount exceeding the present product of the "national treasure" in the gold mines, *and worth more than all the gold obtained.*

We are glad to see that the culture of silk is extending, and observe that it has excited attention at Newark, N. J.—a happy location for the pursuit of this interesting branch of national industry.

It is not likely that we shall soon, if ever, rival France or Italy, in the production of silk piece goods. At present, perhaps, it is not desirable, even if we could do it. But in the supply of sewing silk, and the less delicate manufactures of this beautiful material, we might soon be rendered independent of all the world. The raw silk, as it is called, makes the most pleasant articles of hosiery that are in use, and the cheapest—for they are the most lasting.

The Baltimore "American," in a paragraph relating to the subject, says—

"In considering the present estimation of silk as a common article of clothing for all classes, it is a contrast to recall the extravagant estimates which were placed upon it as a costly luxury in the early stages of the manufacture. One cannot but smile, at reading that amid the enormous luxuries of the emperor Heliogabalus, it is charged against him as a special prodigality, that he wore a suit of clothes, entirely of silk, and that the emperor Aurelian refused the empress a dress of the same kind, because of its immense cost. The Lowell factory girls, who "strike" for wages, now clothe themselves with a material which was too costly for the empress of the world!"

TO KEEP PLUMS AND PEACHES RIPE THROUGH THE YEAR.—Beat well up together equal quantities of honey and spring water; pour the mixture into an earthen vessel; put in the fruit all freshly gathered and cover them up quite close. When any of the fruit is taken out, wash it in cold water, and it will be fit for immediate use.

MISCELLANEOUS.

OCCUPATION.—The cure for maladies like yours, is employment. "Be not solitary; be not idle!" Rely upon it, life was not given to us to be spent in dreams and reverie, but for active, useful exertion, exertion that turns to some account to ourselves, or to others; not laborious idleness. (I say nothing of religion, which is between the heart and its Creator.) This preaching, I know, is foolish enough; but let it pass.—We have all two educations; one we have given us—the other we have ourselves; and, after a certain time of life, when the character has taken its ply, it is idle to attempt to change it.—*Randolph's Letters.*

A Great Queen, or King Bug-a-Bug.—Through the kindness of Dr. M'Murtrie we have had an opportunity of examining one of the most singular animals that ever issued from the plastic hand of Nature, a queen *Termes*, or *White Ant*, which, with other rarities, such as the skeleton of the great African Ourang, the *Chimpanse*, an entirely new *genus* of the Naiades (a description plate of which, we understand, will be found in the next number of the Journal of the Academy of Natural Sciences, now in press), a Snail with its egg, both of most gigantic dimensions, for a snail &c., have lately been sent to the gentleman from South Africa. According to the Doctor, although Termites are found in Europe, Africa, Asia, and America, it is only in the tropical portions of the old world that they are to be found in their "glory." There, their ravages are truly frightful. The communities they form are literally innumerable, and they consist of several sorts of individuals. The *laborers*, or the larvæ which are soft and white, do all the work and all the damage, and the *soldiers*, about half an inch long and of a brown color, do nothing but fight or attend to the defence of the colony, and mount guard over all the laborers. Having passed through the usual metamorphosis of an Ant, the Termites, male and female, take wing together, but soon come to the ground, where the females are seized by the laborers, forcibly conducted to their habitation, and there immured in a cell which is so built up as not to allow the possibility of egress. There the attendants of this now royal personage carefully supply all her wants, and gradually enlarge the dimensions of her (clay) cell, to accommodate it to the increasing size of her abdomen. *Three hundred thousand eggs* are deposited by each of these queens in a few days, being removed as they are produced by numerous attendants (the larvæ) to the adjoining nurseries or cells, where they are piled up and carefully attended to till hatched. The enormous development of the abdomen in this insect may be imagined from the following dimensions of the individual now in the possession of Dr. M'Murtries. Length of head and thorax, four eighths of an inch; breadth of ditto one eighth; abdomen, *four inches and a half long, one inch thick, and upwards of an inch broad.* The specimen by being preserved in diluted alcohol has retained all its freshness, and is perfect even to the antennæ. A memorandum accompanying this great Queen states that the Africans style her the "*King Bug-a-Bug.*" The dwellings of *these* Termites are of clay, somewhat conical, are elevated from ten to thirteen feet above ground, and at a little distance resemble a village of Hottentots.—*Nat. Gaz.*

CHEMISTRY.—When butter is to be made; if a little old butter be put in the cream, the butter will come from much less churning.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* ONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 50	5 00
CORN, yellow,	bushel.	65	66
White,	"	65	66
COTTON, Virginia,	pound.	12	14
North Carolina,	"	11	14
Upland,	"	14	15½
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	1 25	—
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 50
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 25	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	17 00
Pressed,	100 lbs	60	65
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	31	33
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	6 00
OATS,	"	31	33
OIL, linseed,	gallon.	—	92
Castor	"	1 50	1 75
PEAS, red eye,	bushel.	— —	—
Black eye,	"	1 00	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 81	2 87
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	67
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	— —
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 12
Red,	"	90	1 00
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	30	30½
" wagon price,	"	28	29
WAGON FREIGHTS, to Pittsburgh,	100 lbs	— —	1 75
To Wheeling,	"	2 00	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	28 31	18 20

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Sept. 16. Aman Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$1 50	$2 50
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	25	31
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 56	—
EGGS,	dozen.	13	—
FISH, Shad, salted,	barrel.	5 50	6 50
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 75	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	75	—
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	50	62
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

A RARE CHANCE.

THE subscriber has the selling of the following Stock, at prices lower than of any similar stock he has ever known offered in this country. These animals will be for private sale, at the annexed prices, until Saturday, the 25th day of October, (the day after the termination of the Baltimore races), when all that may remain unsold will be offered at public auction. It is probable that many other animals will be added to the sale, of which due notice will be given. The subscriber has recently inspected every individual comprised in the following list, and therefore pledges himself that they will be found to answer the description here given. They are numbered, for convenient reference. Gentlemen wishing to improve their stock are not likely to have frequently such opportunities for doing it as the one now offered them.

Thorough-bred Durham Short-Horns.

No. 1—A Bull, about 18 months old, dun and white, of good size, and very handsome. This is a valuable animal. Price $200.

No. 2—A Heifer, about 18 months old, red and white, of good size, and very handsome. She is in calf to a thorough-bred bull. Price $150.

No. 3—A Heifer, of same age and description in *all* respects as No. 2, and same price. She is a great beauty.

Calves.

No. 4—A white Bull.
5—A dun and white do.
6—A red and white do.
7—A red and white Heifer.
8—A white Heifer.

These are all calves of 1834, of the same stock as the above described, and equally promising. Prices from $80 to $120 each.—Each of the above animals will be sold with a well authenticated pedigree of pure blood.

No 9—A Heifer Calf, red and white.
10 do. do. do.

These two calves are of the same stock as those previously described, and equally handsome, but the pedigrees of their dams being lost, they will be sold without pedigrees, though they are *known* to be thorough-bred. Price $50 each.

No. 11—A thorough-bred bull, about 15 months old, red and white, of good size and form—a very valuable animal. He was bred by a gentleman of Philadelphia, who has imported a few thorough-bred cattle for his own use, but as he does not deal in them, he keeps no written pedigrees of his stock. His certificate, however, which will accompany the bull, is a sufficient guarantee of the purity of his blood. The brother of this bull, 3 years old, was sold this summer by John Barney, Esq. for $300. This will be sold for $200.

Alloyed Durham Short-Horns.

The following, though not thorough-bred, are (several of them) very fine animals.

No. 12—A three-fourths blood Bull, nearly white, two years old in May last—very large—was got by Hector, a thorough-bred bull, raised by Mr. Powell, out of a fine half-blood cow. Price $100.

No. 13—A seven-eighths blood Bull, red and white, two years old in July last, of middling size, and very handsome—got by the celebrated thorough bred bull Bolivar, out of a three-fourths blood cow. Price $100.

No. 14—A three-fourths blood Bull, red and white, one year old—got by Bolivar, out of a half-blood cow. Price $75.

No. 15—A fifteen-sixteenths Bull Calf, five months old, white and red—got by Apollo, (thorough-bred) out of a seven-eighths blood cow. He is a calf of extraordinary beauty, and great promise. Price $75.

No. 16—A seven-eighths Cow, (the dam of No. 15), a fine breeder, for which alone she has been kept. She is 10 years old, in good health and condition, and is supposed to be in calf by No. 12 or 13. Price $50.

No. 17—A three-fourths blood Heifer, 3 years old, white—got by Bolivar, out of a half-blood cow. She is small, but very handsome. She has had one calf, and has proved herself a fair milker, and is in calf now to No. 12 or 13. Price $75.

Sheep.

No. 18—A Buck, of the New Leicester or Improved Bakewell breed, one year old—a good animal. Price $50.

No. 19—A Buck, of the pure Bakewell breed, two years old; a valuable breeder. Price $50.

No. 20—A Buck of last spring; of the Cotswold breed—very large and likely. Price $50.

Address I. I. HITCHCOCK,
American Farmer Establishment,
Who has for sale Devon Cattle of pure blood, at very low prices. Sept. 16.

SEVERAL FINE JACKASSES,

FOR sale at prices from $100 to $1000.—GOOD JENNIES are wanted. Enquire of
I. I. HITCHCOCK,
Oct. 7. American Farmer Establishment.

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Also several NEWFOUNDLAND PUPS. Oct. 7.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26. Amer. Farm. Establishment.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.